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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,648	06/14/2001	Neal R. Butler	L0501/7035	6945

23628 7590 07/10/2003

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER

NGHIEM, MICHAEL P

ART UNIT PAPER NUMBER

2863

DATE MAILED: 07/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,648

Applicant(s)

BUTLER, NEAL R. 

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37. CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

The Amendment filed on April 28, 2003 has been acknowledged.

Terminal Disclaimer

1. An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c).

The terminal disclaimer filed on April 28, 2003 was signed by Mr. Joseph Teja, who is not an attorney of record.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6,274,869 (Butler). Although the conflicting claims are not identical, they are not patentably distinct from each other because even though Butler does not claim a means for providing a variable current or voltage, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Butler with means to vary current and/or voltage for the purpose of providing a time-varying compensation signal as claimed by Butler.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claims 2, 10, and 21, "... wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the plurality of sensors" is not described in the specification.

Claim R ejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9-13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hegel et al. (US 4,752,694).

Hegel et al. discloses all the claimed features of the invention including:

- apparatus and method for compensating errors in at least a first image signal (Figs. 1, 4, 5) comprising:

- at least a first sensor (array 10 of sensors) to detect radiation (column 3, lines 43-47) and to output a first image signal (75) based on the radiation detected by the first sensor (Fig. 4);

- offset correction circuitry (includes 62, 70, 71, 70', 81, 70", 71", 81") to compensate errors in at least the first image signal and to output at least a corrected first image signal (Fig. 4), wherein the offset correction circuitry includes means (VE, resistors R1-R15, switches 101-116) for providing at least one time-varying compensation signal (compensation signal from 81 to VF, column 4, lines 10-37) that is

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added to the first image signal to generate the corrected first image signal (via 51', Fig. 4);

- a plurality of sensors (sensors in array 10) including the first sensor, the plurality of sensors outputting respective image signals based on the radiation detected by each sensor of the plurality of sensors (Fig. 4), and wherein the means for providing at least one time-varying compensation signal includes means for providing a different time-varying compensation signal for at least two sensors of the plurality of sensors (compensation signal varies depending on the degree of non-uniformity, Abstract, lines 5-7);

- the means for providing at least one time-varying compensation signal includes a capacitor (capacitors inherent in IC's 70, 70", 71, 71", 72, 72");

- the at least one time-varying compensation signal is based on a charging and a discharging of the capacitor (Fig. 4);

- the means for providing at least one time-varying compensation signal includes a compensating source (VE and voltage divider) to compensate changes in at least the first image signal due to current-induced heating of at least the first sensor (column 1, lines 27-29);

- the means for providing at least one time-varying compensation signal includes means for providing a variable current (by changing load via voltage divider of 81, column 4, lines 14-16);

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- the means for providing at least one time-varying compensation signal includes means for providing a variable voltage (by changing load via voltage divider of 81, column 4, lines 14-16);
- the first sensor is a microbolometer (Abstract, lines 2-3).

Response to Arguments

5. Applicant's arguments filed on April 28, 2003 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejections, Applicants argue that Hegel's teachings are only limited to constant non-time varying bias signals that are either applied directly to the sensors themselves or at the output of a preamplifier that amplifies signals generated by the sensors.

Examiner's position is that Hegel teaches all the claimed limitation including offset correction circuitry (includes 62, 70, 71, 70', 81, 70", 71", 81") to compensate errors in at least the first image signal and to output at least a corrected first image signal (Fig. 4), wherein the offset correction circuitry includes means (VE, resistors R1-R15, switches 101-116) for providing at least one time-varying compensation signal (compensation signal from 81 to VF, column 4, lines 10-37) that is added to the first image signal to generate the corrected first image signal (via 51', Fig. 4).

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Even though VE is constant, the compensation signal, from the voltage divider of 81 to VF, varies depending on the on/off status of switches (101-116), which varies with time. Further, in Fig. 5, the D/A (71") and S&H (72") suggest that the compensation signal (69) (69 could be referred to as a compensation signal as opposed to 85) is non-constant.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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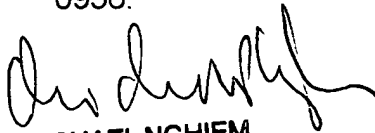
Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.



MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

July 3, 2003